

CONTEMPORARY EASTERN WATER RIGHTS REGULATION

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INSTITUTE OF GOVERNMENT
THE UNIVERSITY OF NORTH CAROLINA
AT CHAPEL HILL

U.N.C. WATER
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A final report in this series is also planned for publication during 1966, and possibly one other Paper.	

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FOREWORD

Water rights law in the Eastern United States, long a subject of scarcely more than academic interest, has lately begun to assume a more prominent place in the public eye. The cause of this upsurge in interest is no mystery. Water in the East is increasing in value as population and economic growth breed competition for this resource. Hitherto a free good, Eastern water is becoming an economic good.

One reflection of the new competition and concern for water is a flourishing output of recent state legislation concerning water rights, or more broadly, concerning water management. A number of Eastern states have significantly modified their water rights and water management laws within the last 15 years. Others are now in the process of evaluating need for new legislation.

Accompanying the trend of rising public interest, there is a growing body of literature on the subject--ranging from law review articles to conference papers, public affairs monographs, and more substantial publications. Many aspects of water rights and water management law have been thoroughly and competently analyzed in this literature. There remains a need, however, for a relatively brief review of the subject of water rights law as a whole, combined with a systematic survey of the recent Eastern states legislation on the subject.

This monograph is designed to meet that need. It also seeks to fill occasional gaps in the literature, such as the lack of a comprehensive current analysis of cases and legislation concerning the use of diffused surface waters. In areas that have been adequately (and often superbly) covered by past writings, I have relied upon those sources.

While the primary subject here is Eastern law, brief resumé's of Western water rights law are included at appropriate points to fill out the picture. And because this monograph is one facet of an over-all study of North Carolina water laws and institutions, North Carolina cases are occasionally singled out for special attention.

The textual context of this monograph is a series of publications produced under a four-year research program concerning water use in North Carolina, undertaken in 1962 by the Institute of Government with

the aid of a grant from the United States Public Health Service. The substance of this monograph is also being published in another form as two chapters of a water use law study by the North Carolina Department of Water Resources.*

I gratefully acknowledge the kind permission of the Harvard Law Review, the Tennessee Law Review, the University of Colorado Law Review (formerly Rocky Mountain Law Review), Dean Frank Trelease, and Vincent Ostrom to reproduce excerpts of previously published articles and texts concerning water rights law.

Milton S. Heath, Jr.
Institute of Government
Chapel Hill
May 1966

*North Carolina Department of Water Resources, Wise Management of North Carolina Water Resources through Law (1966).

CHAPTER 1

A WATER LAW PRIMER

INTRODUCTION

Water rights in the United States are largely a subject of state law, rather than federal law. It is true that federal regulation and federal project administration affect rights to use water in some important ways. But the definition and administration of water rights has traditionally been left to the states, notwithstanding occasional suggestions for federalization of this field of law.

In a very real sense each state is not only entitled to be, but in fact is, a law unto itself on the subject of water rights. There are important doctrinal differences even among many states with kindred traditions, comparable water resources and similar climates. Despite these differences, though, some useful generalizations can be made concerning the field as a whole.

The general outlines of American water rights law are reviewed in this chapter, followed in the next chapter by an analysis of recent legislative developments in other states.

THE LAW OF WATER RIGHTS: A SUMMARY

A threefold classification of waters is made in the law of water rights: surface waters in flowing streams; diffused surface waters (surface drainage); and ground (or underground) water. Each class of waters is governed by a separate set of rules. In addition to this threefold classification, there are other categories to which special rules may be applied, including natural lakes, artificial impoundments, and springs. Each of these matters is touched upon, at least briefly, in this chapter.

Surface Waters in Flowing Streams

Writing one half century ago in the Harvard Law Review Samuel Wiel, a pioneering water law expert, stated that, "Existing or proposed systems of water law have one first elemental principle for all of them. . . .

It is the idea that water running in streams and watercourses is not of itself the property of any person and cannot be. . . . This is expressed at the beginning by the Roman jurists, in the compilation of Justinian, as follows: 'By natural law these things are common to all: the air, running water, the sea, and as a consequence the shores of the sea.' . . . They are not property, or, as has been said, they are in the 'negative community.' This is sometimes phrased that they 'belong to the public' or to the 'state in trust for the people.' The Civil Code of California, § 1410, now uses the expression that waters 'are the property of the people of the state.' But for present purposes I only want to point out that all systems of water law adopt the elemental idea that running water while in its natural situation is not owned; that the law regulates the use of it, but that rights of flow and use are what the law recognizes, and not property in the water itself. The water itself is 'common' or 'publici juris.'"¹

Broadly speaking there are two contrasting types of water rights in American streams today, riparian rights and appropriations. The two doctrines differ markedly in origins, form and content.

Riparian rights: "The doctrine of riparian rights in surface streams is said to have originated in the French civil law, to have been introduced into American jurisprudence by Story and Kent, and thereafter to have been adopted in reliance on decisions by these American jurists as part of the common law of England. In any event, the doctrine is now an established common law concept and prevails, with variations such as might be expected, throughout the eastern United States.

"In its original form, the riparian doctrine placed primary emphasis on the right of all owners of land bordered or crossed by a stream to have its waters flow to them in their normal course, undiminished in quantity or quality. As needs for water and means of effectively utilizing it increased, emphasis shifted to the right of each riparian owner to make reasonable use of the water as it flowed by or through his property. The first uses recognized were for domestic and household purposes and the watering of farm animals--so-called 'natural' uses. Later, recognition was accorded 'artificial' uses for agricultural, manufacturing, power and

¹Samuel C. Wiel, "Theories of Water Law," 27 Harv. L. Rev. 530-531 (1914). Copyright 1914, Harvard Law Review Association.

similar purposes. The distinction between natural and artificial uses was accompanied by development of a rule distinguishing between their exercise; under this rule, a riparian owner may use sufficient water to satisfy his natural wants regardless of the effect on other owners, whereas for artificial purposes he may make only a reasonable use, taking into consideration the equal rights of other riparian owners, of water which is surplus to the natural wants of all of them. The more recent trend has been to blur the distinction between natural and artificial uses and to hold broadly, though no doubt without thereby eliminating a preference for domestic uses in the event of conflict, that riparian owners have common or correlative rights in the stream, and that each may make such use of it as is reasonable under all the circumstances.

"Variations in the riparian rights doctrine as applied in different states relate largely to the extent they have shifted emphasis from right of flow to right of use and on the particular uses they have so far recognized."²

The basic rule has been expressed by the North Carolina Supreme Court as follows:

. . . [O]ur decisions . . . hold that a riparian proprietor is entitled to the natural flow of the stream running through or along his land in its accustomed channel, undiminished in quantity and unimpaired in quality, except as may be occasioned by the reasonable use of water by other like proprietors. [Smith v. Town of Morganton, 187 N.C. 801, 802-3 (1924).]

This Court has also stated (after criticizing decisions emphasizing the right to natural flow) that the right of each individual riparian owner to make reasonable use of water:

. . . for manufacturing purposes as well as for domestic and agricultural purposes . . . [is] qualified only by the requirement that it must be enjoyed with reference to the similar rights of other riparian owners. . . . What constitutes a reasonable use is a question of fact having regard to the subject-matter and the use; the occasion and manner of its application; its object and extent and necessity; the nature and size of the stream; the kind of business to which it is subservient; the importance and necessity of the use claimed by one party and the extent of the injury caused by it to the other. [Dunlap v. Carolina Power and Light Co., 212 N.C. 814, 820, 195 S.E. 43, 46-57 (1938).]

Four concluding observations concerning riparian rights: First, riparian rights is a court-made doctrine that is expressed almost exclu-

²Marquis, Freeman and Heath, "The Movement for New Water Rights Laws in the Tennessee Valley States." 23 Tenn. L. Rev. 806-808 (1955). Copyright 1955, Tennessee Law Review Association.

sively in judicial decisions. (Prior appropriation by comparison is codified to a significant degree in legislation.) Second, riparian rights is a system of water law administered by the courts. (Prior appropriation is interpreted and applied largely by administrative agencies, subject to judicial review.) Third, the doctrine of riparian rights emphasizes the resolving of disputes after they have arisen and crystallized. (Prior appropriation looks more toward establishing water rights in advance of their exercise.) Fourth, "The rationale of the riparian position would seem to be that, since access to water is a necessary physical and legal element, it is better to respect that element in defining water rights."³

Prior appropriation: Dean Frank Trelease of the Wyoming Law School has summarized the origins and content of the doctrine of prior appropriation in the following commentary:

"The doctrine of prior appropriation is a very different form of water law, dominant in the 18 western continental states, including Alaska. Its two cardinal principles are that beneficial use of water, not land ownership, is the basis of the right to use water, and that priority of use, not equality of right, is the basis of the division of water between appropriators when there is not enough for all. The place of use is not limited to the stream bank, as in riparian law, and with few exceptions the water can be used anywhere it is needed. An appropriation is always stated in terms of the right to take a definite quantity of water.

"The allocation of water among appropriators according to priority may need some explanation. On a typical western stream where there are many irrigators with water rights initiated at different times, there may be water for all while the mountain snowpacks melt and the stream is high. As the quantity of water decreases during the dry summer, the diversion works of the appropriators are shut off in inverse order of priority. The last ditch is the first closed, and the earliest is never closed. The right of the senior appropriator extends both upstream and

³Heath, "Legal Concepts for Responsible Water Use Policies." Proceedings of the 7th Southern Municipal and Industrial Waste Conference, p. 117. Durham, N. C., 1958.

downstream. He may take water needed by a junior appropriator below him, while the junior appropriator upstream must permit the water to go past his point of diversion when it is needed to supply the senior rights. The burden of shortage thus falls on those with the later rights, and there is no proration in times of scarcity.

"The history of this doctrine is a fascinating chapter in the story of the growth of American laws and institutions. At the mid-point of the 19th century the common law of waters had definitely crystallized into the law of riparian rights. At this same time, the doctrine of prior appropriation spontaneously developed in the west to meet the needs of pioneers who came to the vast open spaces in search of gold, land and homes. Although it has sometimes been attempted, by doubtful analogies, to trace the doctrine from rather obscure early statements found in pre-riparian English law, or from the early Massachusetts Mill Acts, or from Spanish law, the people who originated the doctrine were not versed in these by-ways of legal learning. They were miners who crowded into the gold fields of California in 1849. Swarming over lands previously uninhabited, they took the gold with the tacit permission of the true owner, the United States. After a lawless period, the miners, essentially law-abiding people from the eastern and mid-western states, organized 'mining districts' to create some semblance of order on the then ungoverned public domain. These de facto governments promulgated rules and adopted customs regulating mining claims, and of equal importance, the right to use water to wash the gold from the gravel in which it was found. They established essentially the same rule for ownership of mining claims and for the right to use water. The discoverer of a mine was protected against all who tried to jump his claim. The first user of water was protected against later takers. This rule was known as prior appropriation--the law of the first taker.

"When permanent settlers took up land for agricultural purposes and recognized the need for irrigation, they adapted to their purposes the water law evolved by the miners. It was a doctrine especially well suited for a pioneering economy based upon the settlement of vacant lands. The first settler to come into a valley chose his land. If irrigation water was needed, he dug a ditch from the stream to his land. Whether his land

was located on the stream or not was immaterial, since there was no one to object to his use of the water. The second settler to follow him into the valley had to respect the first settler's homestead and take second choice of the land, and he had to respect the first appropriator's right to the water and irrigate his lands out of what was left.

"These customary appropriations were confirmed and authorized by state and territorial decisions and statutes, and insofar as made on the public domain, by federal statutes.

"In the meantime, the courts and legislatures of these states and territories adopted the common law as their basic rule of decision, and some applied the common law of riparian rights to streams flowing through or past privately owned lands. States thus recognizing both riparian rights and appropriations were those on the West Coast (California, Oregon and Washington) and on the Great Plains boundary between the humid and the arid areas (the Dakotas, Kansas, Nebraska, Oklahoma and Texas). This dual system of water law has been called the 'California Doctrine,' but this label is something of a misnomer, for not all of these states adopt the basic theory of water rights stated by the California courts. Each state has worked out its own solution in reconciling these two inconsistent doctrines and coordinating the water rights of persons claiming under them.

"On the other hand, the 'Colorado Doctrine' is fairly descriptive of the homogeneity of the law in the mountain states (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming) and in Alaska. These states have rejected riparian law as unsuitable to the climate and geography, and have taken prior appropriation as the sole basis of the right to the use of water.

"One eastern state, Mississippi, has adopted an appropriation law. All the others have statutes affecting waters. Some regulate the construction of dams, manage lake levels, control the taking of water for public supply, or provide organizations for water development. A few have moved so far, in controlling the exercise of riparian rights, usually by requiring permits for water withdrawals, that most water uses are subject to substantial public regulation."⁴

⁴Bloomenthal, Geraud and Trelease, Cases on Natural Resources, 2-3 (West Publishing Co., 1965).

* * * * *

A word of precaution is in order at this point concerning the classification of water law doctrines.

There has been a tendency to over-generalize broad categories within the realm of water law, such as the distinction between riparian rights and prior appropriation. In some ways this had produced an artificial and oversimplified view of the field. One example will suffice as an illustration.

California is generally classed as a prior appropriation jurisdiction. More specifically, as Dean Trelease points out, California is one of a group of far western and Great Plains states which recognizes a combination of riparian rights and appropriations, a dual system sometimes referred to as the "California Doctrine." But as Trelease goes on to say, even this label is something of a misnomer, because each state has worked out its own peculiar reconciliation of these two conflicting doctrines, together with other contributing principles.

A closer examination of the structure of California law shows that in fact it is composed today of at least the following elements:

- . . . Pueblo rights (paramount rights of cities which were organized as "pueblos" under Spanish and Mexican law to use waters naturally occurring within the pueblo for the needs of their inhabitants)
- . . . Appropriative surface water rights
- . . . Riparian rights
- . . . Overlying ground water rights
- . . . Appropriative ground water rights (for non-overlying land)
- . . . Prescriptive rights (based upon adverse use of water for the relatively short period, in California, of five years)
- . . . Mutual prescriptive rights (a new form of right devised by the California Supreme Court in 1949 in response to conflicting claims based upon appropriations, overlying ownership, and prescriptive rights, to the Raymond Basin, a ground water source then being subjected to annual overdrafts which threatened its eventual depletion. The court first determined "present adjusted rights" of each user, these being the highest continuous 5-year prescriptive use for each user. Then the court allocated two-thirds of that amount to each party as a "decreed right," which was calculated to bring the draft upon the basin within safe yield limits.)
- . . . Servitude to areas and counties of origin (legislative restrictions imposed since 1933 on unappropriated waters. These

restrictions protect the interests of counties of origin and areas of origin--the mountain areas which now produce but do not yet use the bulk of the State's water crop--by making certain appropriations contingent upon the present or future needs of these regions.)

In addition to these established rights, which have already put their stamp upon the California waterscape, there are now coming into the picture newer notions of State trusteeship and proprietorship, in conjunction with such developments as the California Water Plan. In time these new concepts may further alter the evolving structure of California water law, perhaps introducing stronger elements of public utility law.⁵

A close observer of California water law, Vincent Ostrom, in a study made under the auspices of Resources for the Future, has noted that prescriptive rights have become a standard claim of many parties to water rights suits in California, because they represent the most secure basis of right for most water users. "As a result," he comments, "one might reasonably contend that if California water law were to be identified with a single doctrine, the state would have to be characterized as a prescriptive right state."⁶ Speaking more broadly, he says:

However, the problem of identifying California with any single predominant doctrine of water law is an impossible intellectual undertaking. The most recent commentary and text on The California Law of Water Rights [Wells Hutchins] avoids any such judgment by characterizing its subject as the "dual system" of water rights. The only question is whether the California water law might more appropriately be characterized as a "plural system" of water rights implying a much greater variety than two doctrines.⁷

This thumbnail sketch of California law--admittedly a very complicated case--illustrates the pitfalls of attempting to identify particular states with the "riparian" group, the "appropriations" group, or even with some subclass or intermediate category such as the "dual system."

⁵This resumé of California law is derived from an unpublished manuscript by Vincent Ostrom as part of a study of the California water industry, sponsored by Resources for the Future. The Law of Water Rights, a chapter prepared for the California Water Industry Study. (1963).

⁶Id. at pages III-42 and III-43.

⁷Id. at pages III-7 and III-8.

Diffused Surface Water

Diffused surface water--or simply "surface water" as it is often termed--is a prolific source of litigation. Most of the lawsuits it spawns, though, are concerned with damage rather than use. In these damage suits the essential issue is how best to allocate the risk of loss: whether to highlands or lowlands; to developers or non-developers; to those who build protective works to help themselves, or those who are damaged by surface waters diverted upon their property by such protective works.

A brief review of the case law on damages is useful in introducing the rules concerning the use of surface waters. At an early date two divergent lines of authority appeared in the American decisions. One group of states followed the "civil law rule" which gives an easement to higher land for natural drainage of surface waters over lowlands. Another group of states adopted the "common enemy" rule which regards surface waters as a foe to be repelled by any landowner without liability, in the absence of negligence. (Some courts have termed this the "common law" rule but others have disputed the accuracy of this designation.) In time, however, these simple distinctions have been blurred by many exceptions and qualifications.⁸ Moreover a third, and smaller, group of states has fixed upon the "reasonable use" of land as the key to resolving these disputes. The picture is further clouded by the fact that in many cases an initial decision must be made whether the waters in question are surface waters rather than the waters of a natural watercourse. If a watercourse is found to exist, different rules may be applied. Additional complications may follow if there is room for argument that the flood waters of a watercourse are involved; and if so, whether these are "ordinary" or "extraordinary" floodwaters.

⁸ North Carolina nominally adheres to the civil law rule, with an additional element, sometimes expressed in this way: that the upper owner cannot artificially increase the natural quantity of water, or change its natural manner of flow by collecting and discharging it upon the servient land at a different place or in a different manner from its natural discharge. More often the North Carolina rule is expressed as being that the upper owner may increase and accelerate, but may not divert, the natural flow to a lower owner's injury.

In sharp contrast to the matter of surface water damage, the question of the right to use surface water is one of the least litigated issues in water law, probably for two principal reasons. Few landowners today are likely to be sufficiently motivated to sue their neighbors over the use of surface waters, which remain more often a curse than a blessing. In the second place, there may be unusual problems of proof which would deter potential plaintiffs.

The case law on this subject, such as it is, indicates that in most jurisdictions a landowner will be considered the absolute owner of all surface waters occurring on his premises. A brief statement of the rule, in Corpus Juris Secundum, is to this effect: "An owner of land owns its surface waters by the same title as he owns the land itself, and he has the right to collect and appropriate it to his own use without liability to others. Riparian rights do not attach to surface waters, and a lower proprietor has no right to have surface water flow to his land from higher land." (93 C.J.S., Waters, § 113)

At the root of this rule is the ancient common law maxim: "Cujus est solum, ejus est usque ad coelum et ad inferos." (He who owns the soil owns it down to the center of the earth and up to the skies.) Though frayed at both ends by contemporary encroachments, this adage remains firm at its core--that is, as to the ownership of the surface of the earth and everything upon it.

A very small minority of states might qualify this rule by some concept of reasonableness--probably by limiting the landowner's rights to an appropriation of surface waters for reasonable uses of the very lands on which those waters are found. (In the alternative, these cases might be read as prescribing a test of reasonable use of the waters, regardless of the location of use.) Also departing from the rule of absolute ownership are some western cases holding that an appropriator from a stream is entitled to rely on all sources feeding the stream above his diversion, including surface waters.

The current status of the case law on the subject of rights to use surface water appears to be as follows:⁹

⁹Because of the absence of any current comprehensive survey of the subject, it was thought worthwhile to summarize the case law on surface water use here.

- . . . Seven states have clearly held in favor of the rule of absolute ownership of surface waters (Idaho, Kentucky, Montana, Rhode Island, South Dakota, Texas and Wyoming).
- . . . Four more states could arguably be added to the jurisdictions listed above, but because of some factual peculiarities or slight ambiguities in the cases one would be on safer ground in saying that these states have probably held in favor of the rule of absolute ownership (Mississippi, New York, Utah and Vermont).
- . . . At least seven states have decisions containing clear dicta expressing adherence to the absolute ownership rule, though on their facts the cases dealt only with issues of damage, not the right of use (Iowa, Kansas, Nebraska, New Jersey, North Carolina, West Virginia, Wisconsin). In all likelihood an exhaustive search would augment this list.
- . . . Four more states have been classified as absolute ownership jurisdictions by authors of law review articles or notes on surface water law in those states, without citation of cases (Florida, Indiana, Missouri and Virginia).
- . . . Two states have decisions containing dicta indicating that they might qualify the rule of absolute ownership by some concept of reasonableness (Minnesota and New Hampshire).

In addition to the case law, there is a scattering of state legislation on the subject, tending strongly to reinforce or defer to the traditional rule of absolute ownership. Kentucky, Indiana, and Oklahoma have simply declared in favor of absolute ownership by statute, while Georgia has legislation that is subject to this interpretation. Arkansas and Virginia have explicitly empowered landowners to exclusively appropriate surface waters to their own use by capturing and impounding such waters. Two eastern states (Iowa and Mississippi) recently enacting comprehensive water use permit laws have excepted surface waters from their scope, and this approach is also found in some western prior appropriation laws.

Our research shows, then, that (a) about half of the states have indicated by judicial decision or by legislation an allegiance to the common law rule of absolute ownership of surface waters, while (b) two Eastern states would probably temper this principle by a rule of reason, and (c) some Western states would subject surface waters to their appropriation statutes. Thus by the prevailing view, in contrast with waters in running streams, surface waters are now considered to be private property, not as a thing common to all or "publici juris." One should not assume, though, that this current view is necessarily immutable.

The evolution of water law doctrines generally in response to changing conditions certainly counsels to the contrary. A particular case in point is the law of ground water use, which is discussed in the next section.

Ground Water

A classic summary of the case law concerning ground water was written in 1958 by one of today's foremost water law experts, Wells A. Hutchins, from which we quote at length:¹⁰

"Throughout the history of ground water law, a legal distinction between waters of definite underground streams and percolating waters has run through various texts, statutes, and court decisions. According to this distinction, a definite underground stream has the characteristics of a watercourse on the surface--definite channel with bed and banks, definite stream of water, and definite source or sources of supply--whereas percolating waters comprise all ground waters that do not conform to the classification of a definite stream.

. . .

"The definite underground stream, being a counterpart of a surface watercourse, is governed by the same legal doctrines that pertain to the latter--a practice that has a sound hydrologic basis. Therefore, in states that recognize the riparian doctrine of rights in surface streams, lands that overlie or are contiguous to definite underground streams have riparian rights in their waters. Likewise, appropriative rights may attach to underground streams in those jurisdictions in which the appropriation doctrine is recognized. And on some major western streams both doctrines are applicable.

"The presumption is that ground waters are percolating. Hence one who asserts that a definite underground stream exists has the burden of proving it.

. . .

"Percolating waters 'belong' to the owners of overlying lands in some jurisdictions, but are subject to appropriation in others.

¹⁰Wells A. Hutchins, "Ground Water Legislation" 30 Rocky Mountain L. Rev. 416, 416-418 (June 1958). Copyright 1958, Rocky Mountain Law Review.

"Of these doctrines of ground water rights that are inherent in over-lying landownership, the English rule of absolute ownership--sometimes termed the common law doctrine--is the earliest in American jurisprudence. In some jurisdictions it still persists. Some courts, however, have imposed qualifications upon the exercise of rights incident to absolute ownership, to the extent that the water be used without malice, negligence, or unnecessary waste.

"Unfavorable experience with the English rule in some localities led to adoption by some courts of the American rule of reasonable use. This rule recognizes the landowner's right to capture and use the water that exists in his land, but limits him to such quantity of water as is necessary for some useful purpose in connection with the land from which the water is extracted. The chief limitations are that waste of the water, or export of the water for distant use, are not reasonable if the result is to deprive other overlying landowners of the opportunity of making reasonable use of the common supply on their own lands.

"An outgrowth of the American rule which has found its greatest expression in California is known as the California doctrine of correlative rights. As developed in a series of court decisions extending over a period of 55 years, the chief features of this doctrine are that owners of all lands that overlies a common supply of percolating water have coequal rights of reasonable use on or in connection with their overlying lands; any surplus above reasonable requirements of landowners may be appropriated for nonoverlying use; and in the event of a shortage of the water, the common supply may be apportioned by court order among the overlying owners in proportion to their reasonable needs."

* * * * *

We can round out the case law picture by noting that North Carolina was one of the earlier Eastern states to adopt the American rule of reasonable use with regard to percolating ground waters, in the case of Rouse v. City of Kinston, 188 N.C. 1, 123 S.E. 482 (1924). While the case on its facts involved artesian waters, there is little reason to doubt that its rationale extends to percolating waters generally, whether or not artesian in character.

Within the past four decades ground waters in the Western states have yielded to prior appropriation principles and increasingly comprehensive statutory controls. Underground streams now are governed by appropriative principles in almost all of the 17 arid states; and percolating ground waters are so governed in the great majority of these states. Where statutory controls have been less emphasized, as in California, the courts have often moved into the gap with equally comprehensive court-made controls.

Extensive legislative regulation has begun to enter the field of ground water in the Eastern states, although at a somewhat slower pace than surface water regulation. Because this subject is covered in some detail in the following chapter, no effort will be made here to review it.

Ground water law thus shows perhaps more plainly than any other branch of water law the erosion of simple ownership conceptions in the face of growing public interest demanded by developmental pressures. The principle of absolute ownership of percolating waters was enunciated in 1843 in the leading English case of Acton v. Blondell. This rule was followed by most of the early American decisions, but by the early 1900's the trend toward reasonable use was well under way. Today but a handful of the states, mostly Eastern and largely in areas which have not received their share of contemporary growth, remain committed to the principle of absolute ownership. Moreover the reasonable use modification, and its correlative rights outgrowth, has outlived its usefulness throughout much of the arid West, to be replaced by appropriative controls. Finally, analogous controls are beginning to find acceptance in parts of the East.

Miscellaneous

Having covered the three major subdivisions of water rights law, we can more briefly review a few miscellaneous categories and issues.

Springs.--In the Eastern states the courts have usually defined rights to use springs in terms of the destination or behavior of the waters after they issue from a spring. If the waters flowing from the spring establish a natural watercourse or stream, they are subject to the normal riparian doctrine and the owner upon whose land the spring

arises is treated as a riparian. However, if the spring waters do not form a watercourse but sink back into the soil or spread vagrantly over the surrounding area, the spring is subject to the usual rules concerning diffused surface waters--that is, in most jurisdictions the landowner at the source of the spring has absolute title to the waters. The most comprehensive discussion of North Carolina water rights law, written by Harold Ellis in 1958, indicates that there are no North Carolina cases directly in point concerning the right to use springs.¹¹

Logically, the use of springs might be governed by rules applicable to the source of waters involved, e.g., percolating ground water or underground streams. An occasional decision may be found which reflects this approach, but it is the exception rather than the rule.

In the Western states the question of entitlement to spring waters usually arises in the context of a dispute between the landowner at the source and a potential appropriator. While it is difficult to generalize the results, it is not unusual for the results to turn upon the same factors as in the Eastern decisions, in that springs giving rise to streams will be found subject to appropriation while springs that are not the source of streams will be governed by the rules concerning diffused surface water.

Lakes and ponds.--Some special rules have been developed concerning rights to use natural lakes and other standing natural waters. These special rules vary somewhat from jurisdiction to jurisdiction and may turn upon such factors as ownership of lake beds and navigability. Without going into these details in depth, it can be stated generally that rights and obligations with regard to both standing waters and flowing surface waters are substantially similar.

Artificial waterways and impoundments.--An artificial waterway is not in and of itself equated by law with a natural waterway, nor an artificial impoundment with a natural lake. However, under some circumstances the artificial may be equated with the natural--where the waterway

¹¹Harold H. Ellis, "Some Legal Aspects of Water Use in North Carolina." Reprinted from The Law of Water Allocation in the Eastern United States, Conservation Foundation (1958), pp. 291-292.

or reservoir is permanent in character, where the circumstances of its creation indicate an intention of permanence, and where it is in fact consistently so used for a long period of time.

The right to insist upon continuation of artificial conditions involving watercourses or reservoirs has been predictably sustained by the courts where the facts of a case have justified a finding of estoppel, or of prescriptive rights, or the creation of an easement by implication. In cases such as these traditional doctrines of property law are being routinely applied as one would expect them to be applied.

On occasion, however--and sometimes where no finding of estoppel or prescription or implied easement could readily be made--some courts have gone further and devised new doctrines to govern these cases. One such doctrine is reciprocal easements by prescription, that is, the notion that when one party to a dispute has acquired a prescriptive right to maintain an artificial reservoir or channel the other party may be accorded a corresponding right to insist upon its continuance. While this concept has been adopted by a few states, it has been rejected by others and has been sharply criticized by textwriters.

Another and more direct avenue is followed in a few cases where an artificial condition is simply treated as if it were natural. This position has been advocated by Dean Evans in a leading law review article.¹² He argues that when a stream channel has been diverted or impoundment created by man, and has been continued long enough to assume in the minds of the neighborhood a settled condition, the artificial condition should be regarded as if created by nature, and riparian rights should attach.

Although it is usually stated that the owner of an impoundment is entitled to abandon it, this plausible notion has not always been strictly enforced. Thus, it has occasionally been held either that the dam owner has a duty of care to maintain the dam in proper condition or that an interested party may enter another's land to repair a faulty structure.

¹²Alvin E. Evans, "Riparian Rights in Artificial Lakes and Streams." 16 Mo. L. Rev. 93 (Apr. 1951).

Recent legislation and legislative proposals of other states on this subject are reviewed in the next chapter.

Other matters.--A brief review of fundamental principles can hardly exhaust a subject so broad as water rights law. In some cases factors not previously mentioned here may materially affect a water right. For example, in some circumstances Federal law may modify State created water rights. And where navigable waters are involved, private water rights are subject to certain paramount public rights. However, having completed an analysis of basic water rights concepts, we now draw this chapter to a close without examining any further variables.

CHAPTER 2

RECENT STATE WATER MANAGEMENT LEGISLATION

In this chapter, recent legislative developments concerning water quantity management will be considered; water quality management is largely excluded from the discussion. Within the field of water quantity management we have chosen to concentrate on a brief summary of recent legislative developments, mainly in the Eastern states, followed by a more detailed review of a few examples of this legislation.

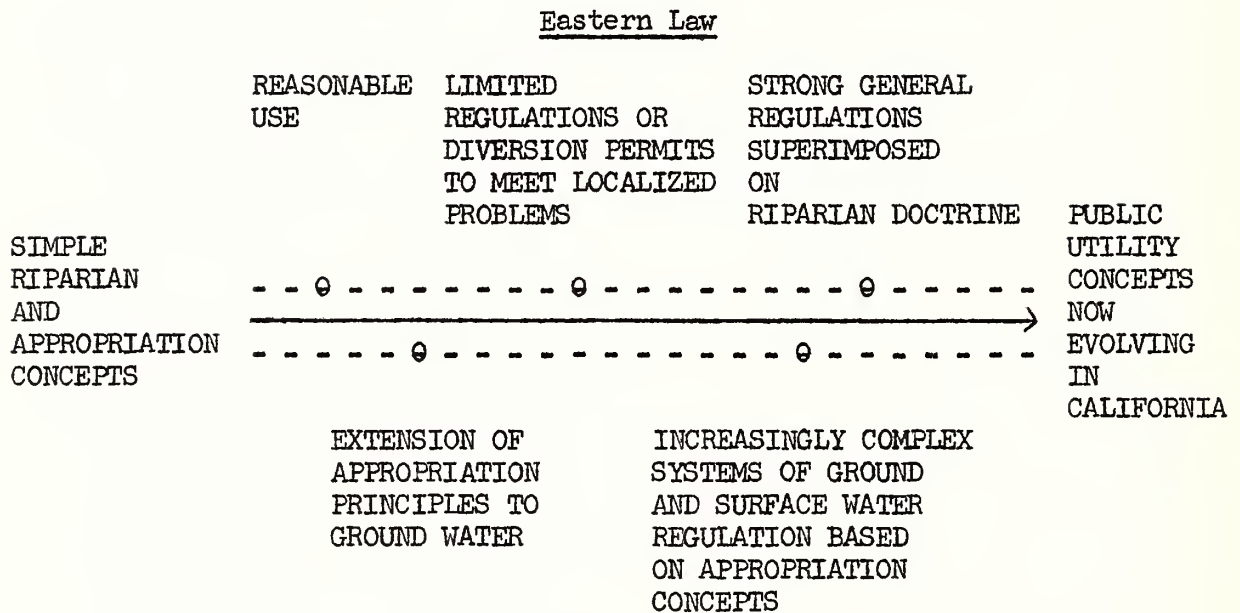
SUMMARY OF RECENT DEVELOPMENTS

State water management laws and programs have varied widely, both in concept and level of effort. At one extreme lies the approach that was characteristic of early riparian and appropriation doctrines and which still persists in some areas today. Here the state government through its judicial and legislative machinery laid down a few simple rules of conduct, relating the use of water to such easily applied factors as access or seniority. At the other extreme lies the complex mixture of detailed regulation and extensive state participation in developmental activities that is exemplified by the State of California. In California today the producers, distributors and consumers of water are with good reason termed the "water industry," and the state government increasingly deals with this industry from top to bottom--from resource to consumption--as a public utility.

A graphic portrayal of the trend of evolution of water rights law is shown in Figure 1. The starting point for both Eastern and Western law is placed at the left end of the trend line. Eastern law is represented on the top side of the line, and Western law on the bottom. At the far right is identified the direction in which both East and West are believed to be moving--toward some concepts resembling public utility law. Expanding population and economic growth supply the motive force for this continuing evolution toward more extensive regulation. (See next page for Figure 1.)

FIGURE 1

TRENDS IN WATER
RIGHTS LAW



Western Law

Western States

Before turning to the Eastern states a brief review of the Western situation is in order.

All of the 17 arid western-most states¹ have subjected flowing surface waters to the appropriation doctrine, either exclusively or in combination with riparian rights. Almost all of these states have now subjected underground waters, both flowing and percolating, to the appropriation doctrine--a marked change since 25 years ago, when less than half of them had done so. In a number of the Western states, state

¹The 17 arid Western states are: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington and Wyoming.

officials have been authorized by statute to designate critical underground areas or basins for special control or management.

Other common features of ground water management codes in Western states include well driller licensing laws, artesian well control statutes, and legal requirements that logs be kept on all wells. One recurrent pattern has been the adoption of these management devices as a prelude to full-fledged appropriation laws.

All but one of the 17 Western states operate their water rights systems through administrative boards or officials. The single exception, Montana, utilizes its courts for this purpose. Most of these states have legislation authorizing the appointment (or in the case of Idaho, the election) of water masters or water commissioners to supervise water use and administer water rights within local districts. This concept of a water master who controls the gates to the ditches of irrigators and other water users points up one of the practical difficulties in transferring Western water law institutions to Eastern circumstances. In the West where ditch irrigation is a prevailing practice, a water master may be able to allocate water use effectively by controlling the gates to a limited number of ditches. In the East, instead of a single fixed ditch supplying one or more large irrigators, the typical pattern is a number of small mobile sprinkler irrigation systems serving small acreages. The sprinkler irrigation system, with movable intakes and pipes, presents a far more vexing water rights enforcement problem than the irrigation ditch.

Supplementing their statutory ground and surface water controls, some of the Western states have launched substantial water resource developmental programs. Best known of these is the California Water Plan, a multi-billion dollar effort entailing massive transfers of water under state government auspices from areas of surplus to areas of shortage.

Eastern States

Prior to the early 1950's the Eastern states had done very little in the water management field, either of a developmental or a regulatory nature. A long-term pattern of adherence to riparian doctrines with minimal state direction or guidance remained largely unbroken.

Today, a dozen years later, the picture has changed markedly. Several Eastern states have made substantial inroads on traditional surface and ground water doctrines. A number of states have enacted less extensive legislation or are now considering major new action. A few states are beginning to go into the business of developing sources of water supply for the benefit of agricultural, industrial and public uses.

Geographically the pattern of change has involved a clustering of state activity around several growth or resource centers: the Middle Atlantic region, radiating out from New Jersey; the Gulf States, with Florida and Mississippi in the lead; and the Lake States, reaching down into Iowa, where a tradition of public interest in natural resources is strong.

Two factors have largely stimulated Eastern water law innovation: cyclical drought conditions and developmental pressures associated with population growth and industrialization. Periodic droughts alone would not ordinarily suffice as a reason for revolutionizing water laws and institutions, though, and this may be an appropriate comment on the abortive effort of the mid-'50's to revise the law of water rights in North Carolina and neighboring states. However, at some point along the rising curves of population and economic growth, problems of local scarcity or overdevelopment of water resources become sufficiently chronic and widespread to demand new water laws and institutions. This has apparently happened in several Eastern states within the past decade, and there is every reason to believe that it will happen in North Carolina before the end of the century. Because such changes can be disruptive and expensive, and will probably tend to freeze water use patterns, it is only wise to consider carefully whether the time to act has indeed arrived. This is the decision that now confronts water resource policy makers in North Carolina.

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Figure 2 on page 24 indicates the types of regulatory measures currently on the statute books in the Eastern states. The labels used in this chart--"limited," "moderate," and "strong" regulation--are intended to convey an over-all impression of the status of regulation in

FIGURE 2
EASTERN WATER USE REGULATION

			<u>Ground Water Only</u>	<u>Surface Water Only</u>	<u>Ground and Surface Water</u>
S T R O N G R E G U L A T I O N				Mississippi Wisconsin	New Jersey Iowa Florida Indiana Minnesota
	M O D E R A T E L I M I T E D	1. Localized regulation: a. Regulation of large wells on Long Island (N.Y.) b. Certification of wells in a limited area (S.C.) 2. Controls on artesian well waste (Ark., Fla., Md., Mich., Minn., N.J., Pa., Va.)		1. Emergency allocation powers for public supplies (N.C.) or broader purposes (Ark.) 2. Permits for public water supply acquisition (Pa.) 3. Permits for water use and diversions for taconite processing (Mich., Minn., Wisc.) 4. Local acts authorizing particular diversions (S.C.) 5. Impoundment permits conditioned on maintaining normal flows (Ark., Ky., Va.) 6. Lake level protections (Minn., Wisc.) and reservoir drawdown controls (Ill., Ind., Mass., Mich., N.H., Pa.) 7. Permits for dredging or filling (N.H., N.Y., Conn.) 8. Permits to change course of certain high quality streams (N.Y.) 9. Surplus water planning (Mich.)	Strong regulatory powers diluted by broad exemptions (Ky., Md.)
L I M I T E D				1. Partial codification of riparianism (Ga., La.) 2. Declaration of state policy plus partial codification or study commission (Ill., Mo., Ohio, R.I., Tenn., Vt., Va., W.Va.)	Registration of large water users (Tenn.)
	R E G U L A T I O N				

the East today. While some of the designations are undoubtedly debatable, it is believed that at least at the extremes of "limited" and "strong" regulation there should be little disagreement with these choices.

As this chart shows there are between five and ten Eastern states with vigorous regulations affecting both ground and surface waters or surface waters only. Some of these "strong" laws are concerned with legalizing the diversion of waters beyond normal boundaries of riparian or overlying land. Others are concerned with controlling or restraining the use of water within certain areas or on a state-wide basis. Their common denominator is some kind of permit system which in most cases is or potentially can be applied state-wide.

To place the matter in its historical context: 15 to 20 years ago there was probably no Eastern state which would have qualified as having "strong regulations."

The "strong regulation" group is balanced by a comparable number of states with water codes that depart only slightly, if at all, from traditional surface and ground water doctrines. (One could add to this group several states that have essentially no water use legislation.) These laws, which we have labelled as "limited regulation," include statutes which merely codify parts of the riparian doctrine as well as statutes which contain a declaration of state policy on water resources, coupled with a study commission approach or with partial codification of riparian rights but no regulatory authority.

In between the extremes lies a middle group of states, larger than either of the first two groups, which has enacted a variety of water use laws--laws having some regulatory effect but falling short of comprehensive water management legislation. Some of these laws are concerned only with ground water, such as localized regulation of ground water use or abatement of artesian well waste. Others deal with surface waters, such as limited or emergency allocation laws; laws sanctioning extraordinary water usage by favored industries; protection of lake levels for the benefit of water recreation or fish life; permits for acquisition of water rights by public water supply agencies; registration of large water users; regulation of sand and gravel dredging in coastal waters; and permits for excavation and fills in navigable waters. One state, South Carolina, has followed a local bill approach authorizing diversions of

waters from certain streams for designated public or industrial uses, and in one case requiring a certificate of convenience and necessity for digging wells in a defined area. New York also has adopted localized regulation of ground water use on Long Island.

Figure 3 below summarizes related legislation involving licensing programs and similar matters--well driller licensing; requirements for logs and other reports on wells; dam safety licensing and inspection; and regulation of floodway encroachments.

FIGURE 3 EASTERN LICENSING, INSPECTION AND RELATED LAWS	
<u>Ground Water</u>	<u>Surface Water</u>
Well driller licensing and reporting and, in some instances, well installation and well use controls (Conn., Ill., Ind., Md., Mass., Minn., Miss., N.J., N.C. [localized], Ohio, Pa., Tenn., Vt.)	1. Damsafety licensing and inspection (Conn., Ind., Iowa, Ky., Md., Mass., Mich., Minn., N.H., N.J., N.Y., Ohio, Pa., R.I., Vt., W.Va., Wisc.) 2. Floodway encroachment regulation (Conn., Ill., Ind., Iowa, Ky., Md., Mass., N.J., Pa., W.Va.)
<u>Note:</u> In addition to the Eastern legislation on the subjects covered by this chart, there are similar laws on all of these subjects in a number of Western states. As to surface water legislation, see Heath, "Flood Damage Prevention in North Carolina," N. C. Department of Water Resources (1963). Page 68. As to ground water legislation, see Clark, "Ground Water Legislation in the Light of the Experience in the Western States," 22 Montana L. Rev. 42, 44 (Fall 1960).	

Turning from regulation to development: several Eastern states have authorized state undertakings to develop water supply sources by constructing reservoirs, managing ground water areas, and the like. New Jersey, matching its regulatory leadership, is perhaps the strongest example with two major reservoirs in North Jersey. Other states with laws providing for similar programs include Illinois, New Hampshire, Ohio, Rhode Island, and most recently Kentucky. West Virginia and Ohio have within the past five years authorized highway agencies to build slack

water dams in connection with road fills. In a different vein, Massachusetts and Rhode Island have recently created new agencies to search out and protect public access to water recreation areas. Also, Wisconsin has designated two streams as "wild rivers" and Maine has very recently enacted legislation creating the Allagash Wilderness Waterway.

DETAILED REVIEW OF SELECTED LAWS

Ground Water and Surface Streams: Strong Regulation

We have been particularly impressed, in reviewing the strong water allocation laws, by their variety of emphasis and content. Notwithstanding some significant efforts to bring about a model or uniform approach in this area, the experience thus far is that local traditions, conditions and needs have been highly influential in shaping the response to pressures for water use regulation in the East.

Some patterns can be found in the new laws, however. Three principal types of allocation laws can be distinguished: a general compulsory permit system; compulsory permits for special problem areas; and machinery to authorize diversion in excess of established minimum flows or water levels. These alternatives can best be illustrated in terms of the laws of Iowa, New Jersey and Florida.

First: The most far-reaching scheme of regulation in the East has been adopted by the State of Iowa. The Iowa law establishes a general permit system. Subject to certain exemptions, it requires that all substantial diversions, storage or withdrawals of water from streams or ground water basins be covered by permits from the state's Natural Resources Council. (Exempt categories include household uses, stock watering, very small withdrawals, existing uses within municipalities, and certain uses from boundary rivers. Some protection, the effect of which cannot be simply stated, is also provided for vested rights. Most areas served by municipal systems, and industrial self-suppliers within city limits, were initially exempted but made subject to future coverage under a provision requiring permits when the usage is increased by more than three per cent.) The principal standards for testing permit applications are beneficial use and compatibility with a comprehensive state water plan. Permits may be denied also if the proposed use would affect the "protected flow" (the

established average minimum flow of a watercourse). Savings clauses were provided for navigability and pollution control laws. Permits under the Iowa law may be granted for renewable terms of no longer than ten years.

General permit systems of the Iowa-type are in force also in Minnesota, for both ground water and surface streams, and in Mississippi for surface streams only. The Mississippi and Minnesota laws, while similar to the Iowa legislation, are by no means identical to it. The Mississippi statute permits appropriations to be made only in excess of computed minimum average stream flows. The Minnesota law exempts, among other things, all uses outside of municipalities prior to 1937 and all uses within municipalities prior to 1959. A number of the detailed provisions of the Iowa law are not paralleled in either the Mississippi or Minnesota laws--by way of illustration, the Iowa provisions restricting permits to a term of years and requiring permits to be compatible with a state water plan.

Maryland and quite recently Kentucky have also enacted general permit legislation of the Iowa-type. Both of these laws, though, are substantially diluted by exemptions.² The Maryland act exempts domestic, farming, municipal and pre-existing uses; while the Kentucky act exempts agricultural, domestic and industrial uses.

Second: A different sort of compulsory permit system geared to the needs of problem areas has been adopted by New Jersey. Applicable both to surface streams and underground waters, New Jersey's law requires permits for those who divert or obtain substantial amounts of water in areas delineated by the Water Policy and Supply Council--areas where consumptive surface water diversions require regulation in the interest of residents of the watershed, or where ground water diversions exceed or threaten to exceed natural replenishment. The minimum diversion subject to regulation is 100,000 gpd of ground water or 70 gpm (approximately 100,000 gpd) of surface water. The ground water law exempts pre-existing diversions, while the surface water law exempts public water supplies and gives priority to pre-existing diversions. A 25-year maximum term

²Despite its broad exemptions, the Kentucky statute in particular appears to be one of the more carefully drafted and well-considered general permit laws that have been enacted.

is prescribed for surface water permits, which may be issued only for diversions in excess of low flows (average minimum daily flows).

Indiana has enacted legislation quite similar to New Jersey's, providing for regulation of large ground water diversions in problem areas.

Third: Still another emphasis is reflected by Florida's water management laws. Rather than providing for compulsory permits as a tool of state control of water resources, Florida provides machinery to authorize diversions of water in local areas. The Florida law empowers the State Board of Conservation to authorize diversion of surface waters from riparian lands and of ground waters from overlying land. Diversions are permissible only in excess of average minimum stream flows, lake levels, or ground water elevations; and they may not interfere with reasonable existing uses. The Board may delegate its authority to local water management districts.

The same underlying philosophy is applied in Wisconsin to surface water only. Temporary diversions of "surplus waters" from lakes or streams are authorized, with Public Service Commission approval, for the purpose of restoring a lake level or maintaining stream flow. Non-surplus diversions for agricultural uses (including irrigation) may also be made with Public Service Commission approval.

A narrower version of this approach is reflected in an Indiana statute authorizing the diversion of flood waters of any watercourse with administrative approval. Somewhat akin to this are laws adopted in several states which authorize landowners to impound streams or floodwaters of streams for various uses, so long as they maintain normal stream flows downstream. (Arkansas, Indiana, Kentucky, Virginia.) A law providing for State development of "surplus waters" for riparian use has recently been adopted in Michigan (see p. 35 below).

Model Water Use Act.--No review of this subject would be complete without mention of the Model Water Use Act. This model was drafted after extensive studies by the Legislative Research Center at the University of Michigan Law School. In 1958 it was approved as a model act by the National Conference of Commissioners on Uniform State Laws. It has been enacted by one state, Hawaii, in modified form affecting only ground water. An early draft of the Model is paralleled substantially by the Iowa legislation reviewed above.

The Model Act provides for a general compulsory permit system slightly more comprehensive in scope than the Iowa legislation, and to be administered by a State Water Resource Commission. In brief, its principal provisions are as follows:

- (1) It provides for regulation under a permit system of all waters of the state subject to (a) exemptions only for domestic uses; and (b) preservation of the right to continue existing beneficial uses, uses in conjunction with pending construction, and uses made within three years prior to enactment--but preserved uses become subject to Commission determination unless declared within three years after enactment. Also, it provides that preserved uses may be extinguished because of non-use for a specified period of years.
- (2) It vests special allocation powers in the Commission to deal with water-short problem areas (comparable to the New Jersey law) and emergency situations.
- (3) It allows the Commission to establish classes of permits and to exempt small uses.
- (4) It limits the maximum permit term to 50 years.
- (5) It specifies as standards for evaluating permit applications: beneficial use; availability of water; no impairment of the most beneficial use of the waters in question by the permit; and no substantial interference with preserved or domestic uses.
- (6) It allows permits to be issued without regard to any common law limitations on use within natural watersheds, use upon riparian land, etc.
- (7) It contains a series of policy declarations concerning beneficial use, conservation, pollution, etc.
- (8) It contains optional provisions: (a) giving water pollution control powers to the Commission; (b) providing for development of a comprehensive plan for most beneficial use of waters; (c) allowing pre-emption of low preference uses by more beneficial uses, on payment of compensation; and (d) empowering the Commission to protect stream flows and lake levels.

The Model Act is a carefully drafted distillation of the water allocation legislation of many states, both Eastern and Western, and should be a helpful drafting aid for any new legislation that may be enacted on the subjects within its scope.

* * * * *

Salt water intrusion.--One other statute should be mentioned under the heading of strong regulation: Florida's salt water intrusion law. This law authorizes the State Board of Water Resources to establish salt water barrier lines in areas where intrusion has reached emergency proportions. Inland of this line no canal may be built or enlarged and no stream may be deepened or enlarged which discharges to tidal waters, without a dam or other control structure seaward of the barrier line.

Ground Water and Surface Streams: Other Legislation

In addition to the examples of "strong regulation" reviewed in the preceding section, we believe it will be useful to describe several other recent laws, programs and proposals because of their possible bearing on North Carolina's needs. Some of the examples we have selected involve laws or programs common to several states, while others portray a cross section of an individual state's program.

New York legislation and proposals.--The development of New York's still evolving water resource management laws presents an interesting and instructive story. New York has been chipping away at the task of devising a viable set of water legislation since 1959. In that year it created a (still existing) Temporary Study Commission on Water Resource Planning, consolidated water management functions in a single Water Resources Commission, and established the framework for a regional water management planning program.

In the intervening years additional legislation has been enacted which, together with laws previously on the books, includes:

- . . . regulation of large wells on Long Island;
- . . . dam safety regulation;
- . . . permits for stream dredging and filling, and for re-channeling some streams;
- . . . centralized control over planning of municipal and irrigation water supply projects to ensure safe construction, protection against contamination, and fairness to other affected municipalities;

- . . . enabling legislation for river regulating and improvement districts, as well as for small watershed programs; and
- . . . a major upgrading of the State's water pollution control program that will ultimately cost billions of dollars.

While these intermediate steps were being taken toward assembling a complete water management program, the Study Commission was considering further possibilities. Among these was a "surplus water" concept advocated by the State Soil Conservation Committee--a proposal to define stream flows in excess of average daily flows as belonging to the State, to be captured and developed for public rather than riparian needs. The Study Commission has flirted with this notion and may yet recommend its adoption. However, the Commission opened up a new avenue of approach in 1963 and 1964 by undertaking a re-evaluation of the issues in light of a particular watershed development proposal (Flint Creek), and by contracting with the Cornell Water Resources Center for consultant studies on legal, economic and technical aspects.

Under the supervision of Professor William Farnham, retired Cornell law teacher, a careful study of water rights law and administration is now under way. One product of this research has already been enacted, a proposal that harmless interference with the natural condition of a natural watercourse or lake may not be enjoined. (This legislation is designed to overcome a line of old cases holding to the contrary, and to bring New York law fully into conformity with the reasonable use version of the riparian doctrine.)

Proceeding methodically to deal with other technical deficiencies of New York riparian doctrines, the Cornell Center is also recommending new legislation along the following lines: (a) that only unreasonable harm caused to a riparian owner by the addition of foreign water to a natural stream (for transportation in the stream channel) shall be considered actionable; (b) that the person for whom lawfully added foreign water is intended may withdraw it at any point of lawful access; and (c) that no riparian owner downstream from an impoundment may take more water from the stream than would naturally be available to him unless he contributes equitably to its construction and maintenance. These recommendations are relevant to problems that have arisen in North Carolina.

Another group of recommendations by the Center is designed to facilitate the financing of small watershed projects by sale of water shares in the project, entitling the shareholders to withdraw specified amounts of water annually. This arrangement was devised in response to the expressions of landowners along the Flint Creek project.

The Center is continuing its legal-economic-technical studies and has mapped out an ambitious plan for further analysis of the structure of existing law and of possible improvements.

Arkansas legislation.--A state which has gone somewhat beyond North Carolina's water management legislation, but along similar lines, is Arkansas.

Under a 1957 law the Arkansas State Soil and Water Conservation Commission is empowered (a) to issue permits (maximum 50-year term) for construction of dams to store water for human consumption, domestic use, industrial use, and irrigation, conditioned upon continuous discharge of normal streamflow downstream; and (b) to ratably allocate available water during shortages among those affected, on its own motion or on petition, with preference to sustaining life, maintaining health and increasing wealth, in that order. The former statute bears some resemblance to North Carolina's approach toward small watershed project supervision, while the latter resembles North Carolina's emergency allocation law.

Arkansas has also enacted controls over flowing artesian wells.

Special treatment for a favored industry.--At least three states, Michigan, Minnesota and Wisconsin, have enacted laws singling out particular industries for special treatment. Michigan authorizes its Water Resource Commission to grant permits for drainage, diversion, control and use of water in connection with low-grade ore mining installations, if the permits would not unreasonably impair the interest of the public or of riparian owners. The Minnesota statute, framed in similar terms, refers to iron ore mining or taconite (as does the Wisconsin statute). It also expressly grants eminent domain powers to taconite mining companies for land, easements and water rights.

A South Carolina special act mentioned earlier, authorizing a named paper company to divert 100 cfs of water from the Great Pee Dee River at a designated place, might be considered analogous to these Michigan and Minnesota laws.

Lake level controls, laws favoring fisheries and recreation, etc.--

Two of the Lake States, Minnesota and Wisconsin, have enacted comprehensive legislation empowering administrative agencies to determine normal levels of lakes and other public waters, and to regulate the fluctuation of those levels--as by fixing a level below which a lake may not be lowered.

A related group of laws, somewhat narrower in scope, requires that water levels be maintained behind dams sufficiently high to preserve fish life, or that the permission of a fisheries agency must be obtained before draining off waters from reservoirs inhabited by fish (Illinois, Indiana, Pennsylvania). One step removed are laws requiring that notice be given to fisheries agencies in advance of drawdowns (Massachusetts, New Hampshire).

Other water use legislation designed to protect fish life includes Indiana and Louisiana laws requiring screens or other devices for large pumps in order to avoid destroying fish life; and a Connecticut law authorizing its wildlife agency to regulate sand and gravel dredging in the interest of fish and game protection and recreational use. New York has a somewhat broader law requiring that permits be obtained from its Water Resources Commission in order to remove sand and gravel from stream beds, or to change the course of a stream classified AA to C, or to make excavations or fills in navigable waters. Standards under this New York law include protection of public health, safety or welfare, and protection against loss or destruction of natural resources.

A great deal of legislation is on the statute books which establishes anti-pollution safeguards for fish and wildlife, North Carolina's "fishkill law" being a good example. This legislation will not be reviewed here, however, since the scope of this chapter excludes water quality management.

Miscellaneous--In concluding this section, we note briefly several other recent laws which we believe merit special mention:

- (1) Florida has earmarked funds from public roads revenues and other sources for annual contributions to an expanded topographic mapping program.

- (2) Indiana has empowered its water resource agency to provide voluntary mediation services in connection with surface water disputes. Minnesota has related legislation providing for referral of water policy questions pending before state agencies and courts to its water resource agency for findings and recommendations.
- (3) New Jersey has established a continuing interim study committee to provide watchdog service to its legislature, to keep the legislature informed of pending investigations and studies.
- (4) Pennsylvania requires that water rights acquisitions by local water supply agencies be approved by its State water agency as a condition to condemnation of water rights.
- (5) New Jersey requires that payments be made to the State for diverted waters to be used for public water supply, industrial uses and other uses.
- (6) Michigan has recently empowered its Water Resources Commission upon local request to make surveys for possible surplus waters available for impoundment and use. If surpluses above "optimum flows" are found to exist the State may develop the surplus waters for nonconsumptive uses to all riparians, charging back the costs to users.
- (7) Two proposals recommended during the mid-'50's drought for consideration by Southeastern states should be mentioned:
 - (a) an extension of eminent domain powers to permit broader use of surface waters by non-riparians or greater security for riparian rights; and
 - (b) an extension of the reasonable use doctrine, along lines suggested by the Restatement of Torts, to sanction any reasonable water uses for riparian or non-riparian purposes, and to make riparian rights freely transferable to non-riparian owners.³

³Marquis, Freeman and Heath, "The Movement for New Water Rights Laws in the Tennessee Valley States." 23 Tenn. L. Rev. 797, 833 (April 1955).

Diffused Surface Water

Most of the Eastern states which have actually enacted legislation concerning the use of diffused surface waters have elected to confirm the common law rule of absolute ownership. That is, they have provided by statute that the owner of land on which such water flows or falls has the unrestricted right to its use. (Arkansas, Indiana, Iowa, Kentucky, Virginia.⁴)

While these enactments have largely favored the absolute ownership rule, some recent proposals lean toward other solutions. The Model Water Use Act prohibits the impounding or collection of diffused surface waters in substantial quantities without securing a permit from the State. In explanation of this provision, the comments accompanying the Model Act state:

In order to secure intelligent management of the uses of the waters of the state and to avoid interference with these uses when made in accordance with the Act, it is necessary for the Commission to have power over all water resources which reasonably could cause interference with uses sanctioned by the Act. This section recognizes the scientifically established fact that all waters whether above, upon, or beneath the earth are part of one hydrological cycle and that an interference with one phase of the cycle affects other phases.⁵

(Notwithstanding the literal terms of the Model Act, its principal author has been quoted as saying that it was not intended to apply to farm ponds but only to large uses of water.⁶)

⁴The Iowa and Virginia statutes are slightly ambiguous, leaving some room for argument that diffused waters would be subject to regulation in certain circumstances. On balance, though, it seems that absolute ownership is the more likely interpretation. The Mississippi legislation contains some similar ambiguities. A Georgia statute is subject to the interpretation that it codifies the rule of absolute ownership.

⁵Handbook of the National Conference of Commissioners on Uniform State Laws (1958). Page 204.

⁶William L. Dolson, "Diffused Surface Water and Riparian Rights: Legal Doctrines in Conflict." Wisconsin L. Rev., Winter 1966, pp. 58, 113-ftn. 231. (Professor Dolson is now on the law school faculty of the University of Louisville.)

Other commentators have suggested that riparian rights and rights to use diffused surface waters ought to be correlated by allowing land-owners to make only reasonable uses of diffused waters while on their land. Suggestions to this effect were made over 20 years ago by Hutchins and the Natural Resources Planning Board. More recently Professor William Dolson has also advocated this point of view, at least as to large surface water users. (Exemption of small uses from regulation is almost universally accepted by the proponents of new legislation concerning diffused surface waters.⁷)

The Cornell University Water Resources Center, principal consultant of the Temporary State Commission on Water Resources Planning in New York, has intimated that it would probably favor prohibiting harmful and unreasonable interferences with surface waters which would normally feed a stream. However, the Center intends to study the law as to the use of surface water more extensively before making definitive recommendations in the area.⁸

In summary, two divergent points should be re-emphasized. First, the existing legislation concerning use of diffused surface water almost without exception codifies the common law rule of absolute ownership. Second, nonetheless, most of the recent published expressions of experts and advisory groups appears to favor statutory modification of the common law doctrine--either by subjecting it to a rule of reason or by making diffused waters subject to permit-type regulation with exemption of small uses.

CONSTITUTIONAL PROBLEMS

Any substantial change in water law brought about by new legislation will inevitably affect existing water rights in some fashion. And since a water right is generally considered to be a form of property right, if

⁷The entire subject of diffused surface waters and suggested regulation thereof is thoroughly reviewed by Dolson in a 1966 law review article. See preceding footnote.

⁸Temporary State Commission on Water Resources Planning (New York), Water Resources Management--a 6-Year Review of Progress and Proposals (N.Y. Leg. Doc. No. 27, 1965), Pp. 243-249.

new legislation adversely affects water rights without providing for compensating the owners for their losses, a constitutional question may be raised. In legal terms the issue can be stated most simply in this way: would the legislation represent a valid exercise of the police power, or would it amount to a taking of private property without compensation, in violation of the Federal and State constitutions?

In capsule form, this is the principal constitutional question that is likely to be raised by new water use legislation in North Carolina or, indeed, in any state. That the question can become meaningful is made clear by the fact that several state laws have been held invalid by state courts under this constitutional test. The likelihood of encountering a constitutional stumbling block can be best judged in the context of the particular new law or proposal.

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